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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,689	12/21/2001	Makoto Ogusu	684.3303	6963

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EXAMINER

LAVARIAS, ARNEL C

ART UNIT PAPER NUMBER

2872

DATE MAILED: 06/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/023,689

Applicant(s)

OGUSU ET AL.

Examiner

Arnel C. Lavarias

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-37 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claim 1, drawn to a method of manufacturing a diffractive optical element, including a process for forming a resist mask of blazed shape upon a substrate and for etching the substrate by use of a resist mask so that the blazed shape is transferred to the substrate, characterized by a process for forming, before the etching, means effective to prevent a taper shape, to be produced at an edge of the blazed shape of the resist mask, from being transferred to the substrate, classified in Class 427, subclass 162.
  - II. Claim 2, drawn to a method of manufacturing a diffractive optical element, including a process for forming a resist mask of blazed shape upon a substrate and for etching the substrate by use of a resist mask so that the blazed shape is transferred to the substrate, characterized by a process for forming, before the etching, a mask of non-blazed shape at a position corresponding to an edge of the blazed shape of the resist mask, classified in Class 427, subclass 162.
  - III. Claim 3, drawn to a method of manufacturing a diffractive optical element, including a process for forming a resist mask of blazed shape upon a substrate and for etching the substrate by use of a resist mask so that the blazed shape is transferred to the substrate, characterized by a process for forming, before the

etching, a protrusion at a position corresponding to an edge of the blazed shape of the resist mask, classified in Class 427, subclass 162.

- IV. Claims 4-30, drawn to a method of manufacturing a diffractive optical element by transferring a mask pattern to a workpiece, characterized in that a shape of a vertical portion of the diffractive optical element is defined by use of a first mask and that a shape of a slant portion of the diffractive optical element is defined by a second mask and in a processing region determined by the first mask, classified in Class 427, subclass 162.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I, II, III, and IV are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, all of the subcombinations have separate utility in a combination without the particulars of the other subcombinations. See MPEP § 806.05(d).
3. Because these inventions are distinct for the reasons given above, the search required for Group I is not required for Group II, III, or IV; the search required for Group II is not required for Group I, III, or IV; the search required for Group III is not required for Group I, II, or IV; and the search required for Group IV is not required for Group I, II, or III, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

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5. Claims 31-37 will be examined along with the elected invention.
6. This application contains claims directed to the following patentably distinct species of the claimed invention:

**Applicant is required to elect one of the following species if election is made to**

**Invention IV:**

Species A: drawn to the method of manufacturing a diffractive optical element as recited in Claim 4, wherein the first and second mask comprise a resist. Claims 7-15.

Species B: drawn to the method of manufacturing a diffractive optical element as recited in Claim 4, wherein the shape of the second mask is defined on the basis of control of exposure amount. Claims 17-22.

Species C: drawn to the method of manufacturing a diffractive optical element as recited in Claim 4, wherein the shape of the vertical portion of the diffractive optical element is defined by use of the first mask having wall-like protrusions formed with a desired period, and wherein the shape of the slant portion of the diffractive optical element is defined by use of the second mask which comprises a resist pattern of desired shape, being provided between the protrusions of the first mask. Claims 23-30.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, Claim 4 is generic among all the species of Invention IV, and Claims 5-6, 16 is generic among only Species A and B of Invention 4.

The Examiner points out that if Species A of Invention IV is elected, Claims 4-16, 31-37 will be examined. If Species B of Invention IV is elected, Claims 4-6, 16-22, 31-37

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will be examined. If Species C of Invention IV is elected, Claims 4, 23-37 will be examined.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

7. A telephone call was made to Scott D. Malpede (202-530-1010) on 6/6/03 to request an oral election to the above restriction requirement, but did not result in an election being made.

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Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

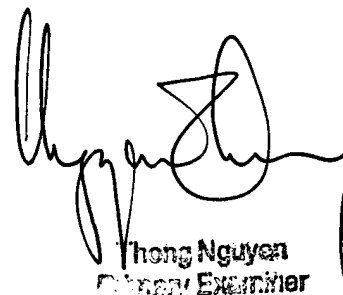
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 703-305-4007. The Examiner can normally be reached on M-F 8:30 AM - 5 PM EST.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.



Arnel C. Lavarias  
June 6, 2003



Thong Nguyen  
Primary Examiner